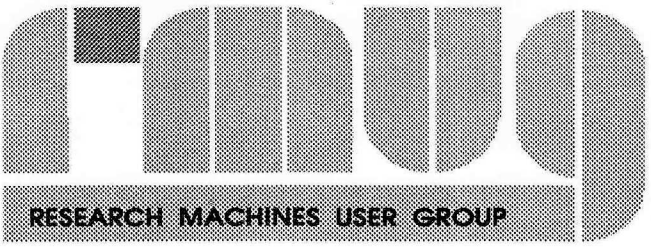
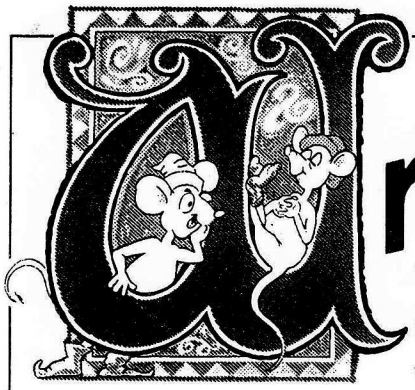
RM User

Volume 7:3

October 1992





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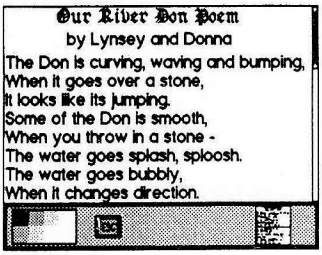
For the beginner . . .


Our River Don Poem
by Lynsey and Donna
The Don is curving, waving and bumping,
When it goes over a stone,
It looks like its jumping.
Some of the Don is smooth,
When you throw in a stone -
The water goes splash, sploosh.
The water goes bubbly,
When it changes direction.

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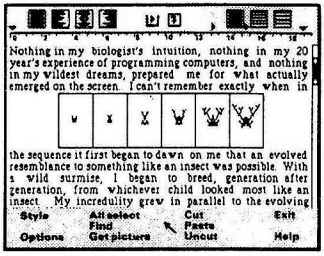
Nothing in my biologist's intuition, nothing in my 20 year's experience of programming computers, and nothing in my wildest dreams, prepared me for what actually emerged on the screen. I can't remember exactly when in
the sequence it first began to dawn on me that an evolved resemblance to something like an insect was possible. With a wild surmise, I began to breed, generation after generation, from whichever child looked most like an insect. My incredulity grew in parallel to the evolving
Style
All select
Cut
Exit
Find
Paste
Options
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SPA

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Telephone (0684) 81700 FAX (0684) 81718

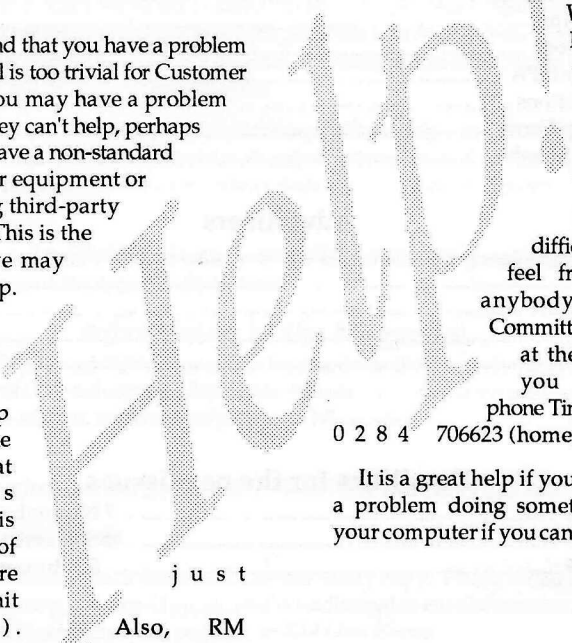
HelpLine

The User Group exists to help its members use the computers which they have.

Many of you (about 20%) are home users of Nimbus computers and we would like to help you. Mary Mabey is a home user who has kindly agreed to let us publish her phone number; you may call her at home on 081 698 7573 if you want some advice on using your computer.

You may find that you have a problem which you feel is too trivial for Customer Support or you may have a problem with which they can't help, perhaps because you have a non-standard setup for your equipment or you are using third-party equipment. This is the time when we may be able to help.

Remember that you can telephone the User Group members in the evening or at weekends when RM is shut (and, of course, you are just bound to hit problems). Also, RM don't claim to have great knowledge of products which they don't producesuch as Excel or PageMaker. They can tell you how to install the packages on their equipment and how to get started but they cannot be expected to give you in depth support on using the packages. We, on the other hand, can. Most of the people whose phone numbers are listed at the back are using the contents of the educational software library on a daily basis. We may have met exactly the problem you have just encountered.



If you are in difficulty, please feel free to ring anybody on the Committee (numbers at the back) and you may also phone Tim Phillips on 0284 706623 (home number).

It is a great help if you are having a problem doing something using your computer if you can be next to it

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RM User 7:5 ..... 18 December 1992
RM User 7:6 ..... 5 February 1993

Two magazines?

For a trial period we are sending two magazines to those people who have paid the standard £15 subscription. We are hoping that you will give the spare copy to a colleague who might be interested in joining so that they can see some of what the User Group has to offer. Please let the membership secretary know if you do not want to receive a second copy (write to RMUG, Freepost, London W12 0BR or phone 081 740 5642)

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News and Editorial

First, an apology for the extremely late arrival of this issue; the start of term is always busy but I had not banked on RMNetLM being quite such a time consuming beast. More elsewhere on the joys and problems of this major new piece of software from RM.

On 1 October, RM announced new prices; almost all machines have come down in price, gone up in specification or both. Since the last issue, the S Series machine has become RM's standard offering. There are many important differences between this and the M Series machines: it has a 25MHz 386SX processor as standard, it now has space for an internal 5" drive (which can be a CD ROM and such machines are available), it uses the Industry Standard Architecture bus (ISA) which means it is much easier to buy add on cards for the machine than the MCA cards used in the M Series and memory is fitted on standard SIMMs rather than the non standard (although possibly faster) boards used by the M Series. An entry level machine with 80Mb drive, 2Mb of RAM, 1 floppy drive and colour monitor now costs £789 and the same price applies to a machine without the hard drive and an RMNetLM ethernet interface. These prices are not the lowest you will find but they do come from a company with a long history of supporting IT in schools, and they do include DOS 5, Windows, a mouse, a 3 year warranty, PC186 mode support and licences for BBC Basic, RM Basic and RM Logo. The only upsetting thing is that I bought M Series stations which were delivered days before the price cuts at the beginning of July; had I waited until October I would have saved nearly ú300 per machine and got better computers as well!

If you want something better than a 386SX machine then you do not have to go to another supplier; RM seem to keep it very quiet but they produce extremely good desk top machines with 486DX processors. They only list them in the HE/FE catalogue but if you want such a machine then I'm sure RM will sell it to you. I'm not sure why they don't list them in the schools catalogue, after RM were one of the first companies to suggest that primary schools needed high powered computers. They were right then so I don't know why they don't want schools to have the most powerful (and, therefore, most futureproof) machines. Phone sales desk to ask for details.

Also over the summer, RM launched the a version of the S Series machine which includes a CD ROM drive and CD ROMs. The system is also available in a multimedia PC version. Prices start at £1299 for a package which includes an 80Mb drive, 4Mb of RAM, and 3 CD ROMs.

Sad news from RM is that for the first time in 19 years they are having to make some staff redundant. This is not brought on by lack of success (sales increased in value by approximately ú2.7m last year; given the price cuts over the past 12 months this reflects an enormous increase in volume) but because it now takes less peope to design and manufacture PCs than was the case a few years ago. RM are now aiming to increase

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their focus on the education market to reflect the growth of their Education Software, Services and Networking activities. Apparently, these now generate a quarter of revenue and involve half the staff.

SPA have just released their new catalogue. If you've recently bought an RM computer for home use then you may never have come across the company before. Software Produciton Associates was formed in 1980 and has been producing excellent software ever since. Much of it is suitable for all ages. For example, it is very easy to get started with a word processing program like Write On! but it can be used at a very high level to produce excellent results. As ever the catalogue contains lots of useful software which is both fun and easy to use. Bayeux is a new program which allows users to build their own Bayeux tapestry and includes a background history of the period. Banner Plus is a banner printing utility which can use any NewSPAper font and can include PaintSPA pictures repeating in the background. Brilliant for advertising functions or just decorating the room! PageLink lets you build branching story books which can, of course, include PaintSPA pictures as well as text. NewSPAper now has an even better Printer's Workshop which allows batch printing (handy if you are printing to an Integrex Colourjet at half an hour per page; just tell the program which pages you want and go home. Next morning the paper is complete.) Page and Picture Porter is a utility which lets you do some very useful things with NewSPAper pages and their components while Artwork disc 3 includes lots of attractive borders and some new maps. SPA are on the move; their new address is PO Box 59, Tewkesbury, GL20 6AB and their phone number is 0684 81700.

Cumana have improved the specification of the CD ROM drives which they sell and reduced their prices; the drives are faster and incorporate automatic lens cleaning. This was one of the things which seemed unnecessary until I started using drives which didn't do it. Make sure that any drives which you buy do have lens cleaning built in or your drives will quickly stop working properly. There is a CD ROM portfolio for education available from Cumana; if you've not yet received one then contact Cumana on 0483 503121 for details. Cumana are also having a clear out of the last of the peripherals for the PC186; there are major price reductions on all items. See their advert in this magazine or phone Steve Dickenson on 0483 503121.

The Centre for World Development Education won a 1992 Educational Technology award for the GRASS version of its World Development Database. A Key Plus version of the data is being developed; details from CWDE on 071- 831 3844.

New from AC Computer Services is a set of packages to make managing an RM Net 3 network easier; Classlog, Classmenu and Classfile. Classlog allows you to very easily create "Classes" of users which can be managed by the teacher for that class. The network manager retains overall control of the network and of the resources offered to the class. The teacher can very easily change passwords for users (or they can do it themselves) and can add new members to their class. All this takes place without restarting the server.

It is possible for users to belong to

more than one class, reflecting the fact that they will use computers in more than one subject.

The management system for the class teacher is designed to be easy to use and requires no knowledge of DOS, all tasks being carried out from special menus. It is even possible for the class supervisor to back up students' files to floppy from these menus.

Classmenu replaces the Blue menu normally used on RM Net. It has the advantage that many more programs can be offered per menu (a theoretical maximum of 7^{20} which is a very big number!) and uses no more than 16k of RAM, allowing much bigger programs to be run from the menus, including Windows applications and it is even possible to run Classmenu from Windows, getting round the limitations of the low number of icons which can be shown on a Windows screen.

Classfile provides a simple file management system which can be made more powerful by giving users appropriate access codes.

All three packages work on all versions of RM Net 2 and 3 and are priced reasonably; the actual price you pay depends on how big your network is. The maximum price you would pay is less than £250 for all three. I don't have space here to do justice to the packages but further details are available from the company on 0922 612239 or write to AC Computer Services Ltd at PO Box 64, Walsall, West Midlands, WS4 1DY

The Ricoh LP1200 laser printer has been receiving good reviews lately so as our school office was looking for a laser printer I decided that this might be a good one to go for. We've only had it a week and so far it seems excellent. It's very fast and copes well with envelopes (we bought the envelope feeder but it will take single envelopes without this). It uses a separate drum and toner cartridge which means that you don't have to replace the drum just because you have run out of toner; I'm convinced that this is a good idea. I use a Ricoh printer to print the originals for the magazine (Ricoh 6000PS). It's now 2 years old and works very well so I suppose that helped me to choose another Ricoh. If you are interested in it then it's available from Silica Systems on 081-309 1111. The normal price is £699 but if you are buying for an educational institution then it's worth asking for a discount!

If you live in the Cheshire area and are interested in joining a local Nimbus User Group then contact Geoff Nelder at Queen's Park High School, Queen's Park, Chester, CH4 7AE Tel: 0244 675468

Special Offer

IF ANYONE IS THINKING OF BUYING BODY WORKS, CHEMISTRY WORKS OR AUTOWORKS THEN CONTACT GEOFF NELDER AT QUEENS PARK HIGH SCHOOL, CHESTER, CH4 7AE; HE CAN ORGANISE EXTREMELY GOOD DISCOUNT PRICES FOR YOU.

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CUMANA END-OF-LINE CLEARANCE SALE

The items listed below are end-of-line products which Cumana are no longer manufacturing. We are offering them at knockdown prices to members of the RM User Group on a strictly first-come-first-served basis. So don't delay!

Product Code	Description	Clearance Price
CRD 600TE	External 60 Mb cassette streamer with PSU and Datasafe software.	**£149.00**
CRD 600	60 Mb cassette streamer - mechanism only.	**£99.00**
CRD 10SE	External 10 Mb cartridge drive with PSU.	**£99.00**
10SE	10 Mb Verbatim cartridge drive - mechanism only	**£49.00**
20SE	20 Mb Verbatim cartridge drive - mechanism only.	**£89.00**
CRD 40DE	External dual 20 Mb cartridge drive with PSU.	**£199.00**
CSR 354	External MFD 3.5" 80 track, double-sided floppy disc drive.	**£39.00**

All items are supplied with a three months warranty (a twelve months warranty is available at an extra cost of £20). All prices exclude VAT and delivery (additional £7.50).

For details of availability please phone Steve Dickenson at Cumana on 0483 503121

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Technical Tips

Stephen D. Sharrad.

In this instalment of Technical Tips I hope to explain some more solutions to some of the problems I have encountered, or some suggestions which I have found useful when using RM equipment.

Leave and Catch - don't slow me down.

The other day somebody asked me what a harddisc's interleave was, and I will now explain here. The interleave of a harddisc is how many rotations the internal disc has to turn, before the next sector - or piece of information, is read or "caught". So, if a harddisc has an interleave of 3, the disc will read one sector, then it will continue to rotate thrice, then the next sector will be read. This makes it obvious that the lower the interleave number, the faster the harddisc's access time is.

Now some large programs like Windows, for instance, do a lot of harddisc "bashing" - in other words they need plenty of harddisc space and time! If you read some manuals of these large programs they will tell you that it might be a good idea to adjust the interleave of your harddisc to optimize its performance. However, on some harddiscs this can be dangerous to the data stored on them, and it really is not a good idea unless you know exactly what you are doing. So this is not to be recommended. Anyway, most harddiscs you buy come set to their best interleave when they leave the manufacturers.

Bye-Bye Problems.

Windows fans may have come across this remarkable error: You've just had one of those real busy sessions on Windows, and feeling like a nice rest and a cuppa you close all your applications in Windows and try to exit. The result? A nice, informative, piece of text floats up onto the screen to say that you have an "Application Still Running Error". But you've got no applications running!

This can be a problem if you want to get back to DOS to run some DOS programs. But this relatively common error among Windows users is quite simple to solve. It's usually caused by the fact that, in your Windows session, you have run a DOS program not specifically designed to run under Windows, or a very old Windows application (e.g. an application for the previous version of Windows.) Some of these programs will run fine and still allow you to leave Windows but some need encouragement. The answer is to write a simple small batch file, using COPY CON xxxxxxxx.BAT in DOS or by using a text editor, such as EDLIN or STEED. An example one might be like this:

```
echo off
cls
echo Loading Paint
cd\paint
paint
cls
cd\windows
echo Finished
exit
```

Of course, PAINT is interchangeable with whatever you want. The really important part is the last line - EXIT. Then run this batch file - not the previous program name, from Windows.

When Windows shells (or runs) another program, if Windows finds it to be a DOS application or an old version of a Windows application, a

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special file is consulted in the SYSTEM directory of your Windows directory. However, the special file with certain programs, does not work properly, and hence the error. So some of the programs that I mentioned need to be put into Batch File Format with an EXIT command at the end. This ensures that everything runs smoothly, and you will not get an "Application still running error."

For those who need to know, the special file is normally WINOLDAP.MOD with Windows 3 - and all the EXIT command does is to return to the previous Command Interpreter (in this case, Windows) properly, closing all files.

By your Command.Com

A Command Interpreter is any program that controls what the computer does next and they normally stay in memory until the program is closed or the computer is turned off. Two examples of these are COMMAND.COM for DOS and (X)MENU.EXE on a Network. Many of these programs can be run and then more programs are run under them When you have finished, you are returned back, with the first program still in memory. Many of these Command Interpreters are called TSR's - Terminate Stay Resident programs.

Network Connections

Every Network Manager dreads the moment when a network apparently goes wrong. It's just too awful to bear the thought of closing down a busy network and doing a hurried repair with users screaming at you all the time. Indeed, the same can be said of trying to quickly install new software on a Network.

Now, you may be familiar with how a RM Network works. Here I am mainly talking about the slightly earlier versions of RM NET, e.g. not RM NET LM. Basically, there is normally a P drive - P for Public, a N drive - N for Network and, when logged on as the Network Manager, an M drive - M for Manager. M drive covers the whole lot, including P, as it normally represents the whole of the harddisk on the current server. P drive is normally completely write-protected to any user. These drives are in fact changeable, and can be changed by the Network Manager. Now, if on a standard setup, you, as Network Manager, enter M drive and copy onto to M:\PUBLIC (which, to an ordinary user, will become P drive) a new piece of software, all may go well. But there are some collections of software which need to be able to write to the same directory as they load off, say to create files.

You, as NETMGR can copy it onto drive M - and even run it off drive M, but, if it is one of the programs which must create files on the default drive, when an ordinary user logs on and tries to run this piece of software, it will, of course, be running of drive P - which is read-only. Here the problem. The software, being unable to write to drive P will crash with unfortunate results.

There is a solution and it will work with any software which needs read-write access to the drive from which it loads. Beware, however, that the reason the public drive is set by RM to be read-only is that it prevents sharing violation errors; the following cure may allow the software to work but it may only be usable by one person at a time!

The idea is that we will set up a new connection - or logical drive, for the

users on the network. This new drive is designed specially for use for a program that needs to read and write to the default program drive. The new connection will contain the program (and the program will be added to the menus) but the drive will not be read-only. If you do not know how to do this, I will now explain:

Before you start, I would mention that you should make written notes of the changes you make.

Logon as NETMGR (on a station) and then run Netman (by selecting Edit User/Groups at the blue menu.)

Wait a while as Netman creates some TEMP (.$$$) files.

Now, if this difficult piece of software is to be used by just one user then press F2 and enter the User name. If it is to be used by just one user group, select F4 and then enter the Group name. If it is to be used by all users, select F6.

Whatever of the above selections you have entered, now press F6. Then, find a spare connection - a drive letter which has not been assigned. Enter a pathname for where this new piece of software will be found on the server, e.g. C:\BIGGLES. Then, in the next column, which is the access column, enter RWC (for Net 2) or RWCDA (for Net3) Now, quit Netman, saving changes. You will return to the first menu, and then press F2 to add the software to the Menu Screens using Conmenu (Edit Menus) and don't forget to put the directory where the new program is to be found, which will be something like L:\ or R:\ (depending on which new drive letter you assigned.) Now, save the menu screen (and you will be returned back again to the first menu.) Now press F9. You will now enter DOS. Copy the new piece of software into its directory. The new drive will not yet have been created but if you entered C:\BIGGLES in Netman, you will now need to create M:\BIGGLES with

```
MD M:\BIGGLES
```

Now copy the software into this directory.

If you find all this different drive business confusing, here is an example which should simplify matters:

Drive Entered as new connection in Netman: **L:**

Drive to User: **L:**

Directory to Server: **C:\BIGGLES**

Drive to NETMGR on a Station: **M:\BIGGLES**

This example would be correct if in Netman, for the spare connection you chose to use, you used L:\ (if available,) and the directory on the server you chose C:\BIGGLES in Netman for the new drive to be allocated to.

So now, when the user logs on and selects the appropriate option, the program will run (from a batch file if you have written one, which you should). The program will load off the new drive and it will also write to the new drive.

Letter to the Editor

Joe Gallagher's letter about the cost of the ILECC Maintenance Service (July 1992) raises a number of issues.

1. Up till now LEAs in inner London have paid for maintenance on behalf of their schools. When this sum is delegated schools have to decide whether an annual maintenance contract remains at the same level of priority against at the same level of priority against competing demands on the budget.

2. ILECC's annual maintenance contract is competitive in price with other companies. We have recently won contracts in open competition.

3. The advantage of an annual maintenance contract is that a school has for a fixed payment a guaranteed cost for the year. Like an insurance policy, whatever goes wrong is repaired with no further charge. The years when the contingency budget are in surplus are good years, the others are more difficult!

4. ILECC will undertake a limited amount of time and part repairs for schools not holding a contract. Schools having repairs done this way are not entitled, however, to use the telephone support service. Schools with an annual maintenance contract are also entitled to discounted rates on a range of other services.

ILECC is looking at other options for schools for the 1993-94 financial year. We are conscious of the pressures on school budgets and indeed have managed to reduce a number of prices this year. We remain a local authority service.

Roger Whitfield (Director of ILECC)

The letter in the previous issue was not intended to criticise ILECC in any way and I would like to thank Roger for clarifying some points. As many schools are finding when they move to Local Management they have to find money for things which have always been centrally provided and maintenance contracts sometimes take a low priority

ILECC provide a good service and quality often costs more. As with insurance its often tempting to go for the cheapest quote and just hope you never have to claim. If you do have to "claim" from ILECC then my opinion is that you will get good service. This ***may*** *not be the case if you use a cheaper company*

As Roger says, you can choose to simply put aside a sum of money in a contingency fund and hope that nothing goes wrong or, that if it does, you have enough money available. This is a risky business and only really possible if you have great faith in the quality of the equipment you use or you can manage if the equipment fails and you don't have the money to repair or replace it.

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CD ROMs and other animals at Burnham Grammar School

Mary Mabey's recent articles have prompted this short note on networked CD's.

The Burnham Grammar School CD system consists of a standard RM dedicated CD server (with 4 drives) on an Ethernet cable to which 4 M series stations are attached, 2 386's in the Library. The main server is a VX386 running a hybrid of Net3.0/3.1(with routing) with one Ethernet and two Znet cards, each of which supports 11 PC186 stations. None of our stations have hard discs, this is a problem for some CD's which look for a C: for temporary files.

Whilst RM supplied titles (Times, Grolier, Library of Future and CIA Factbook) run well (once we had adapted their batch files for PC186 use by adding the SET ENVSPC = lines), running some CD's over the network is very difficult, standalone titles will usually only run from one single user area with all relevant files in that area, Read/Write access is usually needed.

One major difficulty is the volume of text which students wish to print out. Perhaps a utility which could allow each user an allowed amount of printing, eg 10 sides per week across the network could be of use ?

We have a printer sharer attached to the Library stations, connected to a Canon BJ300 printer. (Does anyone know of a way to save on cartridge costs ?)

As part of the NCET evaluation, we trialled Zyzomys, a French Encyclopaedia, The Bible Library, a collection of 17 Bibles and other works, World Atlas (non Windows) and North Polar Expedition.

Zyzomys did not reveal any information on the French revolution but is generally OK if your French is sound. i.e. Sixth form use.

Bible Library can only install on a standalone system and needs 539589 bytes of real memory. This is difficult on 2Mb network stations, we have achieved 539808 bytes on our 386's by hiloading drivers and removing the keyboard driver which is in 386 firmware. (A well hidden feature!)

World Atlas is also memory-hungry and hangs up when you exit. RM know about this but as yet have no solution. It also creates 100 Kb temporary files!

Library of Future is fine but a bit boring unless you are interested in English, Literature, History or Classics (we still do Latin!)

Mary mentioned the lack of a Science/ Technology reference. We have bought the McGraw-Hill Science and Technical reference which is really good and runs across the network. Actually version 2 has a bug in it which prevents searching. Optech, from whom we bought it have diagnosed a fault in the search software which insists on a C: on which to store search information in temporary files. By the time this is published, we should have the network compatible version of the search software.

We have also tried out the new Electricity and Magnetism disc.

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One future project is the revamping of our aging tape-based language laboratory, made by Tandberg in 1960-something. Our linguists want to replace it with a modern version of the same thing, ie cassette based. I am sure that a CD-served Windows 3.1 based system could be far more useful, with sound over the network and listening in by teacher possible. Does anyone know of developments in this field? Technically, Ethernet should allow quite good sound, I believe.

Finally, does anyone have any experience of Optinet version 2, which RM do not yet sell ? I am told it gives all sorts of advantages, including faster access of drives, but until now have been a very dutiful RM customer. Prices from other suppliers, who now do seem to understand the Education market much better, are very attractive at times.

David Thomas, Burnham Grammar School, Hogfair Lane, Bucks, SL1 7HG

Tel. 0628 604812

CD ROM on the network is one of the things which I still think has potential which we have not yet fully exploited. I'll comment here on some of David's problems but I would welcome feedback from more expert readers.

The first problem is creating a drive C: for machines which need it. It's possible to make a special share on the server and then connect to it from the station; if you are running Net 3.1 then you can specify that the user has RWC access to the drive, this is often enough and will prevent them from accidentally or deliberately deleting files which another user will need.

Lack of memory for DOS programs is an ever present problem (and at the moment it's worse on Net LM than on Net 3 although I believe that the next release of the software will fix this) If you can live without PC186 support then removing these drivers will help. Leaving out the mouse driver will also help (put HILOAD /V /Q Q:\MOUSE.SYS at the start of any batch file which needs the mouse; this means that if you have used a mouse using program then the memory won't be available for your memory hungry application later but as long as you run it as soon as you boot you will be OK)

Although it is theoretically feasible to send sound over Ethernet I suspect that if you did it for more than a few stations you would saturate the network cable. I also think that a CD is not fast enough (if each pupil is listening to a different section the drive will spend all its time searching for the correct bit and you'll never actually hear anything!)

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Using the Brother HL-8PS on the RM Net 3.x

Richard Naylor

This printer supports both HP Laserjet and Postscript modes therefore it would be useful to be able to use either mode on the network with automatic switching between modes. The following assumes that your server has an Epson printer attached to LPT1: and the HL-8PS attached to LPT2:

1. As the manager using (X)NETMAN or NMS go to Printer Options and set up:

```
LPT1
EPSON
N
N
EPSON.SEP

LPT2
HPLASER
N
N
HPLASER.SEP

LPT2
PSLASER
N
N
PSLASER.SEP
```

2. Depending on the level (PUBLIC, GROUP or USER) at which you wish to allow access to the laser attach EPSON to printer 1, HPLASER to printer 2 and PSLASER to printer 3.

3. Save the changes and reboot the server.

4. Edit the SEP files in M:\SPOOL so that they contain the following:

HPLASER.SEP

```
ESC CR H ESC E
1B,0D,48,1B,45
```

PSLASER.SEP

```
ESC CR A B
1B,0D,41,42
```

(The first line is the filename, the second the contents in characters and the third is the contents in hex)

This could be done by using DEBUG to edit the hexadecimal contents of each file. In this way the appropriate banner file is sent before each job so that the printer is placed in the correct mode. (To use debug to do this type the following (bold are debug's responses; you type the rest.

```
M:\SPOOL>debug pslaser.sep
File not found
-e100
1572:0100  AE.1B 90.0d 12. 41
 13. 42
-rcx
CX 0000
:4
-w
Writing 00004 bytes
-q
M:\SPOOL>
```

Note that the numbers in bold (except the 0100) may not be the same. Press space after the first three numbers and enter after the last one.

5) At the command line:

PRINTER1 gives access to the EPSON

PRINTER2 gives access to the HPLASER

PRINTER3 gives access to the PSLASER

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6) In Windows 3 use Printers in the Control Panel to configure the EPSON printer to LPT1, HPLASER to LPT2 and the Postscript printer to LPT3. Make all printers active and select the one you want to use. The printer you wish to use can be selected from the Printer Setup option available in most applications.

Thanks to John Tierney of the CLASS project in Belfast for passing on the undocumented escape sequences for the Brother HL-8PS.

R.A Naylor, Methodist College, 1 Malone Road Belfast BT9 6BY

This method has general use for a printer which can be used in more than one mode; for example the Ricoh Laser printer which I use can operate in PostScript, HP LaserJet, Epson FX or Diablo 630 modes and you change between them using Escape sequences such as those listed by Richard. It's well worth looking in the printer manual to see if you can swap printer modes by sending codes; if so then you can make use of the printer with software which may not support the default setting.

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Managing Network Groups with Windows 3

Malachy McCormac

In order that network users can have easy access to software it is important to have some sort of menu system which is simple, friendly and managed with relative ease. The ECUmenu system was designed and developed at the North Eastern Education and Library Board's Educational Computer Unit in Ballymena with these criteria in mind and it still meets the needs of many users of standalone systems as well as network managers. The rationale behind our approach has been, and remains, that all network users should be registered on the system with an individual ID and password, where necessary, and have open access to all software. Group names and IDs should be such that they hold good for all the years that students are at the school. Users' initials and surnames are used as IDs with the initials first to provide variability. Group names such as INT90 will endure over time with only minor user additions and deletions as required. After initial setup based on this approach, managers should only have to upload new software and maintain users as required. The wholesale creation of groups to cater to various subjects means that users may have no personal ID and indeed may be required to log onto the network with a different ID for each subject.

RM have now settled on Windows 3 as the standard user interface for all their recent network systems. Those who acquire RM's Lan Manager networking software will find that all network management procedures are done through Windows. The standard interface now requires users to be familiar with windows, icons and pointing devices.

Windows 3 running under Net 3.1 permits network managers to provide either restricted or unrestricted group access. It is assumed that most users will be members of restricted groups who cannot effectively change any aspect of the Windows environment which is not provided for them by the manager. It should be noted that restricted access is a group and not a single user status.

RM suggest that the network manager creates a windows environment for individual user groups, thus duplicating overall management demands. In most school situations restricted access is appropriate to almost all users. Where unrestricted or different access is necessary then it is possible to apply this status to the individual group as required.

In this article I will be using the existing GROUPR windows configuration as a template. This will then be applied to other groups which either already exist or which will be created in the future. All new software or changes to the configuration will firstly be applied to GROUPR and thence to other groups whose status is to be the same. In effect, a network manager will only have to manage one group.

On the N drive (M:\MGR) the WINMNG directory has a TEMPLATES sub-directory which contains the windows status files for GROUPR (restricted) and GROUPW (unrestricted). A DEFAULT status exists which is applied initially to all users who are neither unrestricted

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nor restricted. In effect, default status is the same as unrestricted. When a new restricted group is created, the relevant files are copied from the TEMPLATES\GROUPR sub-directory to a directory with the new group name on the public drive where access is shared by all group members: M:\PUBLIC\WIN\RMNET\GROUPNAME.

From then on, these files on the public drive are the files which will be modified when changes in the Windows configuration are made and which will be applied to other groups. The template files always remain in their original form.

Before beginning this procedure it is worthwhile experimenting with the manager's Windows configuration to be reasonably familiar with the environment. It is especially important to be able to add and remove program group folders and add and remove software from folders. Note that Windows 3 does not permit folders within folders. Remember that any changes you make now will only apply to the manager's Windows configuration.

Changing the Windows configuration for GROUPR

Plan the arrangement of folders (program groups) and applications (program icons) which you wish to provide.

Make sure that you have expanded or loaded any printer drivers which you may wish to include by copying them to M:\PUBLIC\WIN\SYSTEM before running the Windows management program.

Modify any batch files which you propose to use so that they will run from Windows. In general, batch files for use from Windows should not switch modes. Software which runs in IBM mode will run directly from Windows on an M Series machine (and this includes BBC Basic programs; BBC Basic can swap modes on its own). Software which runs in PC186 mode must be prefaced by RUNPC186.COM to switch. Windows applications must have their directory name added to the path in the appropriate WIN.BAT. Keep the directory name as short as possible in order to conserve environment space (eg WW for Winword, SB for Superbase).

Make sure you are logged on as a manager (NETMGR) to the N drive at the DOS prompt and then type:

```
CD WINMNG
WINMNG GROUPR
```

to change to the WINMNG directory and then load the management program; this sometimes fails inexplicably, if so then retype the last line.

Windows as set up for GROUPR will run and be displayed in Manager mode. This means that any changes which are made will remain in effect for all users of that group.

Add or remove software as required to create the environment and display which you wish all restricted users to have.

It will probably be helpful to network users if a menu type structure could be maintained. Create folders for the range of subjects for which you have software; eg History, Geography etc., and place within them those items which are appropriate.

Use the File New options to create program groups and items. Create an open window along the top of the screen for IT TOOLS in order that the

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interface is inviting and attractive.

Run the control panel by using File Run, typing CONTROL in the dialogue box and then pressing Enter. Choose the printer option and follow the procedure to add new printers or choose a printer as required. This simple procedure replaces the PRNTMNG program which merely runs the control panel independently so this method allows all setup and management to be carried out under WINMNG.

Whilst in the control panel you may choose the desktop option and change the space between icons; 100 allows adequate space if you have long names, 60 may be enough if the names are short.

When you have an arrangement which is satisfactory, EXIT windows and the Windows configuration files will be updated automatically for GROUPR. This means that a set of files which reflected the status when you exited will be written to M:\PUBLIC\WIN\RMNET\GROUPR.

Applying a prepared restricted status to existing groups

There may be a number of existing groups already on your network for whom you will want Windows to be the standard interface. This will require only a few steps which can be fully automated using an appropriate batch file.

Cloning

First, create a directory within the RMNET sub-directory with the name of your group, eg INT91; at the N:\> prompt type:

```
MD M:\PUBLIC\WIN\RMNET\INT91
```

Now copy the files which contain the Windows status for GROUPR to this directory; again, at the N:\> prompt type:

```
RMTREE COPY
  M:\PUBLIC\WIN\RMNET\GROUPR\*.*
  M:\PUBLIC\WIN\RMNET\INT91 /R
```

The final /R allows RMTREE to overwrite existing read-only files and sets the copied files to read-only as necessary.

You now have a directory on the PUBLIC drive which contains the status for Group INT91.

All groups must have access to a command processor which will cause Windows to run when logging on. In this instance it is best simply to use a public command processor.

Run (X)NETMAN from the N:\> prompt

Select F6 - Public Options

Select F2 - Public logon options

Enter the following command line:

```
?:\COMMAND.COM /C WIN
```

Press F2 to keep the changes

Press F7 then F9 to exit and keep the changes.

(You may need to remove any group or user command processors to make sure that all users get the default, public command processor). Test the changes by rebooting the server and log in on as a member of the changed group.

To do the same for a new group, simply use XNETMAN to create the group and users and follow the same steps as described above under cloning. Where no command processor exists for a group the public command processor will be applied.

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Reboot and test.

Steps to managing groups with Windows 3

1. Use GROUPR as a template for all RESTRICTED users.
2. Add new software, printers etc. to this group through WINMNG GROUPR
3. Create a new group in M:\PUBLIC\WIN\RMNET using the name of the group
4. Copy the Windows configuration files from GROUPR in RMNET to the new directory
5. Provided that you have set Windows as public command processor you will have to do nothing special for this new group
6. Updates will simply require modifications to GROUPR through WINMNG and then copying the updated files across to the restricted group directories as in step 4.

Malachy McCormac is the Post-Primary IT development officer at teh Educational Computer Unit of the North Eastern Education and Library Board, based in Ballymena.

Although the detail of the article is relevant to Net 3.1 users, the basic ideas are sound for anyone setting up Windows for use either on standalone machines or on NetLM; aim to provide a screen which makes available the main tools (such as Word) quickly but without hiding away subject specific software.

For those who don't have an RM Network, the business of creating group directories with certain files in them is to make sure that users always see the same screen layout for Windows. This might look as if Network Managers are trying to restrict the freedom of users to alter their desktop appearance and set up their own preferred working environment; for many users, however, the chances are that they will accidentally change their setup and be unable to get back to a useful working position. Windows on the network simply copies the correct .GRP and .INI files into the user's own directory before starting Windows. This makes sure that each time Windows is started it appears in the way the Manager intended it to appear.

Hints and Tips in this issue also has some ideas about how to make this happen on a standalone computer.

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Using Stacker on a PC-186

Ray Harris

I bought Stacker to use on a notebook, where it does what is needed effectively, giving the extra space on a 20Mb drive. I thought it would be worth trying it on a PC-186 so without risking the hard drives I decided to try increasing space on the 10Mb removable Cumana drive (which uses Kodak media) and on the 0.5Mb ram disk, which is set up by DEVICE=SI-TURBO.SYS, a Whittle Systems device driver.

It works!

The Stacker files are stored on drive C in C:\STACKER. The CONFIG.SYS file includes the line

```
DEVICE=C:\STACKER\STACKER.COM **@
```

the "*" allowing extra drive letters, and the "@" allows replaceable drives. The asterisks are not essential but give flexibility.

The program STACKER.COM runs without requiring SETPC, although the other programs I have used in the suite do need the Nimbus in IBM mode.

The removable drive was set up under SETPC using the INSTALL program provided, which ran without any hitches, and even though it was half full of files they were all carefully gathered together and verified, with nothing lost. The Ramdisk also has about 1.5Mb available under a projected compression ratio of 3:1, often possible, but changeable if this proves too high.

I have now created several Stacker disks for the removable drive, and with LOGO, for example, there is no notable loss of speed in loading and saving files. I have been able to release plenty of space on my 20Mb fixed disk C:. When changing disks in the Cumana drive (H:) I should only need to type "stacker h:": sometimes that works, but occasionally I have to put in a non-"stacked" disk and type DIR, for example, before replacing it with the "stacked" disk and running stacker. The program loses track of the directory, but probably because one of the disks was originally formatted using the Cumana /RM switch, and the other not.

Despite this minor inconvenience the extra space created is well worth it. Of course, using the removable Cumana drive, even without Stacker, is excellent both for backing up and for running programs, especially if they do not need to access the drive often. However, the benefit of 20Mb or more of removable drive is remarkable.

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CD ? ROM

Groliers Electronic Encyclopaedia

Q1 Who was responsible for the planning of the **Ford Mustang**?

Q2 What does the **Czech** word **Robot** mean?

Q3 Where does the breed of dog called a **Papillon** take its name from?

Q4 **Joseph Aspdin** was believed to have been responsible for the rediscovery of what common building material in **1824**?

Q5 What is the signifcance of the bridge at **Coalbrookdale** which spans the **River Severn**?

Q6 In which year did **King Edward VIII** relinquish his claim to the throne and how?

Q7 Which **assassination** did the **Warren Commission** investigate?

Q8 There are 3 **freedoms** mentioned in the 1st **Amendment** of the **Constitution** of the United States. What are they?

Q9 What is the melting point of **Krypton**?

The following questions require access to a PC286 or above to be able to view the pictures and maps.

Q10 According to the picture of **William Shakespeare** what three things did he write?

Q11 The **krait** is a snake, what colour are the bands on its body in the picture?

Q12 What is the name of the expanse of water to the west of **Florida**?

Q13 What is the capital of **Albania**? (The capital cities are underlined on the maps.)

Q14 Which river feeds Lake Geneva in **Switzerland**?

Q15 Which islands lie to the North West of **Malta**?

Memory Management

Steve Rochford

In this article I hope to clear some of the confusion concerning the memory that is fitted to your Nimbus. I'll start with the PC186, which is the easiest to understand, and then move on to the other machines.

The earliest Nimbuses had just 128kb of memory but for many years every machine has had at least 512kb and most have had 1Mb or 1.5Mb. RM designed the machine to be different from the IBM PC; in many ways this caused problems but it does have some advantages. If you boot a PC186 with a plain MS DOS disc then you will find you have about 900kb of memory available for programs. This is excellent for running Windows although the relatively slow speed of the processor and the poor graphics (compared to VGA or Super VGA; they are much better than the CGA standard that is the nearest IBM equivalent) means that Windows is not wonderful. The 512kb of extra memory on a 1Mb machine is not available to DOS or Windows (this is a limitation of the 80186 design and is nothing to do with RM's design) but can be used as a disc cache or as a silicon disc; either method can speed up the running of programs such as Windows.

The situation with the other, true IBM compatible machines is different. When IBM first designed the PC it was using a processor that could not address more than 1Mb of memory. This was so vast that it was not seen as a problem and only the bottom 640kb of this was made available to DOS. (This 640kb of memory is often known as conventional or base memory.) The top 384kb is reserved for use by system ROMs and by the video memory. Only a few years after the design came into use this was seen as causing a problem; many programs needed more than 640kb (especially because DOS itself had to fit in here, perhaps taking more than 100kb and any other memory resident programs also had to fit in this space). Various ways of getting round this problem were devised but the standard that was developed by Lotus, Intel and Microsoft is known as Expanded Memory. (You will see reference sometimes to LIM EMS; the two major versions have been 3.2 and 4.0.) This will work with any of the 80x86 processor family and uses a 64kb area of the reserved memory between 640kb and 1Mb as a *window* into the extra memory. What happens is that you fit, say, 1Mb of expanded memory. At any one time only 64kb of that is available and some clever electronics and software, the *expanded memory manager* switches the correct 64kb block into use when it is needed. This is a relatively slow method of handling memory and is falling out of favour now that more people have machines that support extended memory (see later). A further disadvantage of expanded memory is that the memory manager uses some of the precious 640kb of base memory so if you are running a program that does not need expanded memory then it may be as well to disable the memory manager.

In the mid 1980s Intel released the 80286 processor. This could behave exactly like an 8086 or 8088 but also could address much more memory (up to 16Mb) but only when working

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in a special, *protected*, mode. Working like this the whole of the memory area is available simultaneously to the processor that makes it possible to write fast programs that address large amounts of memory without the bank switching needed by EMS. There is a standard way of handling extended memory and your computer uses a driver that conforms to the eXtended Memory Specification (XMS) to enable programs such as Windows to cleanly work with other extended memory users. The 80386 and 80486 processors are just bigger and better 80286s in memory management terms (and apologies to the purists for this massive oversimplification).

Making the best of it

Having sorted all that out, how can we make the best of the memory that we have? Unfortunately if you have a PC816 there is very little you can do. The first step for the rest is to ask if you need to do anything at all. If you've never had problems with programs saying that there is insufficient memory then you needn't do anything; a golden rule in computing is "If it isn't broken then don't fix it!" If you have had problems then you should definitely upgrade to DOS 5 if you don't already have it. This makes much better use of the memory known as Upper Memory between 640kb and 1088kb (note that this is 64kb above the 1Mb line). If you have a PC286 or PC386 from RM then the default settings for memory use on the machine may not be the best you could have. If you look on the master system disc then you will find a series of files in the \SYS directory with names of the form CONFIGnn.LIB (where nn is a number ranging from 00 to 08 on my disc). These are examples of CONFIG.SYS files designed for use in various situations and they are well worth looking at. The safest way of doing this is either to print them out. If you are happy working at the DOS prompt you can just type

```
COPY A:\SYS\CONFIG*.LIB>LPT1
```

or you can load them into Windows Notepad and then either look at them or print them out one at a time. When you have found the one that you want you can copy it in place of your existing CONFIG.SYS file. For safety you need to make a copy of your existing file by typing

```
COPY C:\CONFIG.SYS C:\CONFIG.STD
```

and then install the new version by typing

```
COPY A:\SYS\CONFIGnn.LIB C:\CONFIG.SYS
```

(put the number you want in place of nn). Remember that you must not edit CONFIG.STD; this is your standard file and will be needed if things go wrong.

Take the floppy out of drive A and then reboot. If you find that things are not what you expected then you can simply type

```
COPY C:\CONFIG.STD C:\CONFIG.SYS
```

and you will get back to where you were. If for some reason your computer won't boot then put the floppy in the drive and boot from that. You will then be able to get to the C:\> prompt to restore your CONFIG.SYS file.

If you want to maximise memory for DOS programs then you can remove some of the device drivers; the RM.SYS and RMNIMBUS.SYS drivers are only needed to provide PC186 support. If you don't want that (and I don't!) then delete those

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lines. Most of the time I run Windows applications and if you do the same then your CONFIG.SYS can be very simple; the default shipped by RM will work well because Windows efficiently uses extended memory and is not particularly helped by a few extra kilobytes of base memory. If you do need to run big DOS programs that don't need expanded memory then you should look at the information on using RMUMB.SYS in your MSDOS 5.0 User Guide; this gives a sample file and shows how you can set up the system to make DOS use upper memory. The key thing to remember is that using devicehigh to load device drivers will move them into the upper memory area. For example, DEVICEHIGH=C:\SYS\MOUSE.SYS moves the mouse driver needed for DOS programs out of the bottom 640kb and gains nearly 17kb of memory. If you need expanded memory and you have got a PC386 machine then you can use the EMM386 program; again, the User Guide gives example files of how to set up this program to give just expanded memory, just upper memory or both. The advantage of RMUMB is that it doesn't take up memory providing EMS that you may not need. The disadvantage is that RM.SYS must be loaded. If you have a large number of device drivers to load then RMUMB is definitely better (and this is why it is used on RMNetLM). If you don't then EMM386 is probably better - but note that this is not an option with a 286 based machine so you must use RMUMB.

Having edited CONFIG.SYS and rebooted your computer, how do you find out if you are any better off? Type MEM /C at the DOS prompt to get a list of how the memory is being used. The important figures to look for are the largest executable program size (611kb is achievable quite easily) and the largest available upper memory block (with RMUMB I get about 105kb; with EMM386 it falls to 40kb without EMS support and 16kb with EMS support). There is little advantage to having a large block of upper memory free if you have no programs that can load into it so don't worry too much about this figure; if your program can make use of EMS then it makes sense to use EMM386 to provide it.

Once you have found the settings that give you EMS for programs that need it then you may choose to save this version of CONFIG.SYS as CONFIG.EMS and the version that just gives extended memory as CONFIG.XMS. Simply copying the appropriate file to CONFIG.SYS and rebooting will set your machine up ready for the applications that need the two different types of memory. (Remember that the expanded memory provided by EMM386 is provided by using some extended memories so don't make EMS available if you are only using Windows.)

I do hope that this has pointed some people in the right direction; do please write or phone if you want some point clarifying or if you have found a better way of setting up your computer to allow everything to work together.

RM Net LM the reality

Geoff Nelder

Last week of term other scholastic minds were on scrabbling for report forms, last minute marking of books for pupils to be handed on to other lucky staff, vacantly dreaming of the drive though Gaul to pastures Vin whilst pupils swing from the lights. But me? Scrabbling for more HD disks to clear in order to save more essential files on because I don't fully trust my EZtape (easy lost) tape streamer and my file server was about to be zapped to have OS2 and NetLM installed. Finding dozens of files called F.DAT or orders.XLS that I was sure were vital but couldn't remember what they were for! All those PD, shareware or cheapware and trial software that I had learnt to love and hoped would still work on LM.

"Don't worry, as long as your OPTINET software is at least version 1.3 we will only charge £55 to ensure that it will work properly on OS2"

"Stand by to be gobsmacked at the speed and efficiency of LM"

I watched the carrier sling my 486 in his van and I sat by the phone. Two days later Abingdon rang.

"No point putting Optinet 1.3 back on since V2.0 is about ready and we will send it you. Yes it will be user friendly for even you to install it and you will have saved £55!" "Yes, we can fit your OS version of your Irwin streamer and we have noted your printer requirements and our printed promise to deliver a working system for your delight."

Two days later it came back. I didn't want to spend August in school so I took it home. File server in the dining room area, CDROM station in the living room area next to my comfy chair and the QUME printer under a table. What's this ? No tape streamer card installed? Ah they only said they **could** install it! Trusty screwdriver out again. What have I done wrong? tape streamer will not be talked to by the server!! 30 minutes on the special hotline for LM managers (sorry -administrators) and I suggest that could it be the extra cable I needed for an M station was not required for the server? OK. Why did the instructions say that the streamer is best attached to a station when I have just paid to have it detached?

"Sorry don't know - er by the way, upgrading to Optinet V.2 will cost you an extra £495. Is that OK? Oh and the station used for the CDROM should really be an Ethernet and have 4Mb RAM - will that be OK?" "There must a bad line - a lot of grinding teeth noises are coming through"

Ah well at least the tape streamer now works. Where shall I put all those P and Q based third party software? In P:\LIB fine but watch EZtape 2Mb/minute for the first minute, then 1.5Mb, .5Mb, .1Mb, 0Mb. It gave up on several long files but with the aid of two backup tapes and much wasted time with error messages waiting for me to read before carrying on it only took about 8 hours to put about 70 Mb of files back on. 8 hours!! It did not take as long to figure out how to customise Windows Desktops and sort out some user groups. Some applications went on like a dream. Grass works fine. I

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know it's naff but there are so many useful data files for Maths and Humanities.

We had just bought site license for PCGLOBE5 after having made much use of the earlier versions. V5 has history notes on each country - includes the new CIS and some notion of Yugoslavia identity crisis. But it would not work. It is too big. Even V4 is too big. The penalty of using Windows as the front end is that it grabs memory from heavy apps. With help from Colin McKewan, Nick Robinson's technical wizard, we managed to get V5 working although without the mouse driver loaded.

Then I tried to print. Aaaaarghh! Colin discovered that in their eagerness to get us our file server returned, an ethernet card was put in with incorrectly set jumpers. Once, corrected, the network prints faster than ever.

It's only a few days old and I have invested a lot of time in setting up groups, apps and their icons and it's well worth it. Pupils and staff welcome the friendly front end and greater efficiency. Colin and I still have some work to do with regard to CD ROM and memory and RM are quite quick to rectify the bugs (sorry, extra features). If you are buying or upgrading a network - go for LM - the mugs have already sorted out most of the few problems.

One of the problems with Net LM is that you really need to set it all up, try it for a while and decide what it should look like then do it all again! For example, the problem of insufficient memory to run DOS programs can be reduced by removing Win Popup but until you've used the network for a while you won't know whether the messaging facility is one you can't live without or if it's something you really need to lose. Losing it gets back quite a lot of memory; to do it, use station manager to remove the two programs MSRV and NETPOPUP from Post Station startup and then edit the file U:\W30\RMWIN\RMWNA\CD.RMI to remove the winpopup line. Save changes and close station manager and then restart the station you have changed. You will find it starts a bit faster (three less programs to load), there are no irritating messages about printing, your hackers can't send obscenities around the network and there are fewer crashes when running RM Mode applications.

A small tip which may help when working on the server in an OS/2 Window. You will have found that the F3 key no longer retypes a line; instead, use the up cursor key to go back to any previously typed line and then the left and right keys to move through and edit it.

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Wanderings through RMNetLM

John Marsh

The first week of September saw the delivery of our new network: a 300Mb LM server and 16 4Mb PC386/20s with laser printer. What follows are some of my joys, tribulations and discoveries in the first four hectic weeks of its use.

After one day back at school we have no network, even though promised (and Order Management says the carrier collected them days ago) and then the front office phoned to say that a lot of boxes had arrived. I am expecting about 45 boxes and think of my poor back! I go to have a look and it's only the monitors!! I carry them up to the curriculum computer room, unpack them all and put them on their benches; they look nice, but no computers. A few days later the rest of the order arrives, at 5.15pm, after I have gone home; my back is very thankful!

The next day I unpack them all, connect one machine to the server and SWITCH ON. It doesn't work!!!

RM Networks always plug in and work, their adverts say so, so it must be me. I try another piece of cable, another T-piece, another terminator and finally phone RM. Tech, oops, Customer Support (when are they going to change that music??) can't help, I must phone the special NetLM manager's help line. I phone the new number (same music!) and problem solved. The very new NetLM doesn't like the even newer machines and there should be a server upgrade disc in every box. NO discs in any box and they promise they'll send me one. (This is actually simplified to protect the innocent as I actually spoke to 3 people, including them phoning me once, before we all agreed that I needed a disc and which particular disc it was.)

The next day, no disc in the post.

The next day, no disc again. The Spanish say that Mañana is too early; I know how they feel. (I might have phoned RM again today, but I've lost track)

The next day I get a phone call from RM and a very pleasant man says "I understand that you haven't got the upgrade disc; we'll send you one." Why wait three days to tell me something I already know, why not just send me the disc?

The next day I get the disc, upgrade the server and IT WORKS!

I connect each machine in turn and register it with the server, and very quickly have all 16 machines up and running. It looks good!

Now to set up some users and menus as classes are booked to come in. I had spent a lot of time in the Summer trying to work out how best to organise Groups and Users as I expected every time a class came in, all the pupils would have to have different user identities. We have 1600 pupils and as every user takes up quite a lot of room on the server it would be impossible to give every pupil their own id. (How big a server would I need, any guesses?)

I was, therefore, very relieved to find that it is possible to set up multi-use user identities (see later). I, therefore, decided to set up subject /

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class users eg 7CENGLISH, 8HSCIENCE etc. This has worked satisfactorily except that if a lot of users log on at the same time we get numerous error messages objecting to this and asking them to try again, so they are not true multi-user identities as the documentation says, unless there is something else I need to know. Does anyone know otherwise? Also to avoid users accidentally rubbing each other's work out we usually allocate numbers to them and they then use this to prefix any file names. It's simple but it has survived the test of time on our Net 3.1 Technology network where we have used a similar system for two years without pupils losing work.

Incidentally, I must say that adding new users and Windows menus is so very simple and neat and RM deserve applause for this. As an example of this: a class arrived in the room with no user identities (I had forgotten that they were coming). I had the ids up and running within 2 minutes, and it's done in real time without having to restart the server. Having got the network up and running it was now time to start putting other pieces of software on and here the fun really starts.

Batch files can be a pain in the neck, but I have spent years learning them and I reckon I can get almost anything to run on our Net 3.1 but now MTSL arrives. This is a bit like a batch file and for well behaved Windows programs you can create an MTSL script just filling in an on-screen form like that for a PIF. For other programs, and realistically this is just about everything, you have to write a text file which has to be turned into an EXE file by a procedure which is hidden deep in a help file on the network and is not as clear as it should be; bring back the well tried and trusty batch file again! No doubt those with RM Net LM will already have worked this out, but for those with the delights to come it might be useful.

1. Create a plain text file, following the MTSL rules, to load your application and save it in P:\APPSTART. I find it easier to load an existing one and edit it to suit my purposes. The rest of this assumes we are trying to set up MS Works.

2. Change directory to L:\BIN

3. If your application is a DOS one type COPY DOSMTSL.EXE MSWRUN.EXE or for a Windows one, type COPY WINMTSL.EXE MSWRUN.EXE (you must not use the same name as the Windows executable)

4. Now type

```
MINSTALL -LOAD MSWRUN.EXE
 P:\APPSTART\MSWORKS.TXT
```

5. Copy MSWRUN.EXE to P:\APPSTART

6. Use MSWRUN.EXE as the command name when setting up Program Manager for a user.

To simplify all this I have put steps 3,4 and 5 in two batch files (DOS and WIN) which I call up with the name of the application and they organise the files appropriately.

Now for actually running the applications themselves. It is rarely possible to use the install option that comes with the programs themselves except in cases where the install program does not need to edit WIN.INI itself.

The simplest way to handle things is to install the program to a standalone machine and then copy across the relevant files to the server; this can take a long time. Now you have to look at WIN.INI and discover what the install program did to it (hint: take a copy of WIN.INI before you start as WIN.OLD and then run two copies of Notepad, one holding WIN.INI and the other WIN.OLD; this way you can see the changes).

In the case of MS Works, this is what I did.

1. Buy enough packs of Works for Windows (check the licensing agreements for the software you want to use).

2. Install it standalone in C:\MSWORKS, run it to set page sizes, printer set ups and template guides which go automatically into MSWORKS.INI.

3. Create P:\LIB\MSWORKS with sub-directories PROOF, MSWORKS.CBT and CLIPART.

4. Copy all the files from C:\MSWORKS and below to the new directories on drive P:; use something like RMTREE which will copy empty files otherwise CUSTOM.DIC is not created.

5. Edit the MTSL file for MSWORKS to include the line:

```
COPY P:\LIB\MSWORKS\MSWORKS.INI %td%
```

so that MSWORKS.INI is available each time the program runs.

I also copy a standard set of template files for the application as well in a similar way which were set up in step 2 above. This saves having to set page sizes etc. each time.

6. WIN.INI needs editing; unfortunately, RM Net LM builds WIN.INI each time you log on from a variety of sources. The file called U:\W30\RMWIN\WINDOWS\DEFAULT.WNI is the one where you add program specific bits (my thanks to Simon Nud, an extremely helpful member of Customer Support, for that and other useful ideas). You need to add the following lines:

```
[MS Proofing Tools]
Custom Dict 1 =
 p:\lib\msworks\proof\custom.dic
Spelling 2057,0 =
 p:\lib\msworks\proof\msspell.dll,
 p:\lib\msworks\proof\mssp_br.lex
```

7. Put this new version of DEFAULT.WNI on the network and as stations are rebooted it will be picked up.

8. Include Works on the Program Manager screen and use as a simple but powerful introduction to Word Processing, Databases and Spreadsheets.

There are other delights and heartaches I would like to look at. DOS Logon, which I bought to try and run PC Globe which refused to run from Windows due to memory shortages. I can now run it but I am not really happy with it. I would like to be able to free memory after starting as a Windows user, even though I couldn't get it back without re-booting.

It is a real delight to have three printers running off the server at once on three queues (laser, colour ink jet and 24 pin dot matrix).

Finally, I have had no problems with the actual running of the network, only some unrecoverable application errors from Windows (which sometimes happen on standalone machines) Net LM happily runs a room full of machines all using Word and Draw simultaneously, though it is a little slow if they all decide to print on the laser at the same time. So well done to RM from me, even though I know that our Editor has a much more sorry tale to tell.

Indeed, I do! I won't fill the magazine with the troubles I've had (and if I went into detail then I would fill the mag!) suffice to say that I am no longer using RM Net LM but have reverted back to Net 3.1. It's much slower than LM (about one quarter of the speed according to Nettest and this seems about right if you look at real applications such as loading Word or scrolling through a PageMaker file) and I've got nowhere near as much disc space. I can't edit users so easily and printers are much more difficult to control. The positive point is that, for me, it works while NetLM did not. I'd like to thank the engineers from RM who spent so much time on site (especially Tim Nash who stayed until late into the night and seemed to get the system running). I have got a problem which a small number of other sites have encountered such that when a large number of users are working on the system and a further group logs on then the whole thing collapses with a variety of error messages.

RM are aware of the problem and I'm sure they will fix it but for now it's back to Net 3.1

On a more positive note, if you are using RM Net LM and having problems with Spool + then the best thing to do is to remove all references to it from LANMAN.INI and CONFIG.SYS on the server, delete all the Spool + files and start again, following the installation instructions ***to the letter****! You must not have the same domain name for Spool + as the rest of the network and station names must not be the same as printer queue names or the spooler names used by Spool+. If you do all this (and remember that Spool + will only work if your local printers are all on the same cable as you installed Spool + to use on the server, then you have an excellent product.*

Other printer problems are sometimes caused if the queue data somehow becomes corrupt on the server. If this is the case then use the OS/2 print manager on the server to delete any faulty queue (or even all queues) and then re-create them at a station. I don't know why this works but it does!

If you want to occasionally boot a station from Net LM which is normally standalone then you can make a boot disc by creating a DOS 5 system disc in the normal way and then copying the contents of O:\DOS500\SYSTEM to the floppy. Register the station and then recopy the LANMAN.DOS directory to the floppy (this contains the registration information about the stations). Finally rename the appropriate CONFIG file (eg on an M Series 386, CONFIG.SY9 becomes CONFIG.SYS) You should not do this for regular use; it's too easy to get all the different files out of step.

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Hints and Tips

Preserving Windows Groups

When you first receive your machine Windows is set up and ready to use. You may be quite happy to keep this setting and never change it or you may change it immediately. Whichever is the case, ultimately you are going to find that you have made changes to it which you did not intend and will need to get it back to the last setting that you liked. How can you do this? Let's assume that Windows is looking the way you want it to look (either as delivered or as altered by you). Close Windows by clicking on the box in the top left corner (it's called the Control Menu Box) and choosing Close. This will get you to a DOS prompt; probably C:\> You are now going to make a copy of some important files. Type the following lines, making sure you press Enter at the end of each one.

```
C:
CD \
MD \WINBACK
COPY C:\WINDOWS\*.GRP C:\WINBACK
COPY C:\WINDOWS\*.INI C:\WINBACK
```

That saves a copy of the files which control the way Windows looks, the printer you have selected, if you have one, and many other settings. You can now type WIN to go back to Windows or do whatever you want to do next. When something dreadful happens and the Windows screen is no longer recognisable then you can close Windows and get to the DOS prompt again. Type this set of instructions:

```
C:
COPY C:\WINBACK\*.* C:\WINDOWS
WIN
```

to restart Windows with the screen and everything else back the way it was.

Remember that if you deliberately change your Windows appearance (for example, you buy a new piece of software or you decide to have a different desktop pattern) then you should come out of Windows, making sure that you save settings on exit and then save the important files by typing the following pair of lines

```
COPY C:\WINDOWS\*.GRP C:\WINBACK
COPY C:\WINDOWS\*.INI C:\WINBACK
```

If you are running Windows 3.0 then you save settings by clicking on the Save Settings check box before finally exiting; in Windows 3.1 you need to go to the options menu and click on the Save Settins on Exit menu item. (Alternatively, in Windows 3.1, hold down the Shift and Ctrl keys and choose File Exit. Windows won't exit but the changes will be saved immediately)

Date on Net 3 Servers

If the date is set wrongly on your network server then this can cause all sorts of problems, all of which seem really odd and don't appear to have anything to do with the date (stations will fail to boot or they will get to the Network logon screen but not accept an identity or will fail to make connections; there are many other symptoms). If anything strange happens then it's worth checking the time on the server; just type STATUS at the Server: prompt for a status screen with the time at the top of it. If the time is wrong then this may indicate a flat battery, especially if you are using a PC186 with serial piconet card and you've never fitted a new battery. Batteries for Piconet modules are available from RM or,

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more simply, from places like Boots. Batteries for X series machines are available from RM and good suppliers of computer bits and pieces; HCS Global on 081 560 8585 list a suitable battery

RUNPC186.COM

Some users have reported that using RUNPC186.COM to run a PC186 mode program from Windows sometimes gives the message that your pop-up program has been loaded and warning you to press CTRL C to return to Windows. Although it doesn't seem to cause a problem, it shouldn't happen. Has anyone else had this problem and, if so, how do you get round it?

Installing printer drivers on Net 3

First of all, you should log on as NETMGR and copy all the files from the printer driver disc to M:\PUBLIC\WIN\SYSTEM. Now type TOGGLE OFF and run the Windows print manager batch file. When you choose to install an unlisted printer you are asked to put the disc in drive A:; delete the A:\ and put P:\WIN\SYSTEM in its place. Windows will now show you all the driver files, including the one you just copied and will not try to copy it when you click on OK (it knows it's already in the right place).

Menus on XPublic / Public

Users of PC186 and other machines may get different menus, even though you specify ?:\MENU.EXE ?:\MENUONE as command processor. This is because there are two copies of the MENUONE.MCD file; one on M:\XPUBLIC and one on M:\PUBLIC. If you want to edit the menu, make sure that you edit both versions (and don't just copy the file from one to the other; sometimes there are different options set for the different types of machines!)

Changing the default fonts for Word for Windows

As delivered, Word for Windows chooses Helv as a font which prints perfectly on a PostScript laser but not on a dot matrix or other printer. Close down all open files in Word and open the file called NORMAL.DOT (stored in C:\WINWORD on a standalone, in the user's own directory on a network). Choose Format Styles and redefine the style called Normal to be the font you want to use. Close the file, saving global glossary and command changes when prompted. That's all for a standalone user. On a network, if you want this font to be available to all users then you must copy the file NORMAL.DOT from your own directory to P:\WW (on Net 3) or P:\LIB\WW1 or P:\LIB\WW2 (on Net LM and depending on whether you used Word 1 or Word 2). When you have copied it, set it to read only and then delete all other copies of NORMAL.DOT from the network. (This will cause problems if your users have customised their own NORMAL templates, in which case you should not delete the templates for users who have created their own; using something like XTree Gold you can sort the files into date order and only delete those that carry the original date.)

Word for Windows on RMNetLM

If you are running a mixture of PC186 and later machines on RMNetLM then you will find that the system will automatically pick up Word version 1 on a PC186 and version 2 on the other machines (because version 2 will not run on a 186). This is fine unless you do some work on (say) a PC386 and then

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go to a PC186. Word will load the file but include garbage at the start and end because it does not recognise the Word 2 format. If you save the file from Word 2 and know that you will later want to work with it on a PC186 then you must save it in the Word for Windows 1 format, using the Save as Type box at the bottom of the File Save As dialogue box. This gets confusing and it may be better to edit the script file which loads Word so that it always picks up Word version 1 on every machine. This will also avoid the error messages about WINWORD.INI being corrupt.

Wanted

480z BASIC to Nimbus BASIC conversion program.

If you have this program then please contact:

D Williams at Grays Farm Primary School, Grays Farm Road, St Pauls Cray, Kent BR5 3BD, Tel: 081 300 5283

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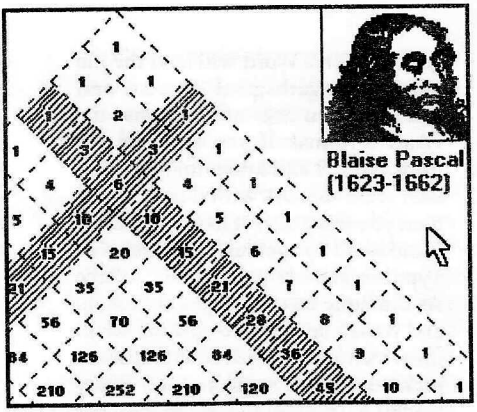
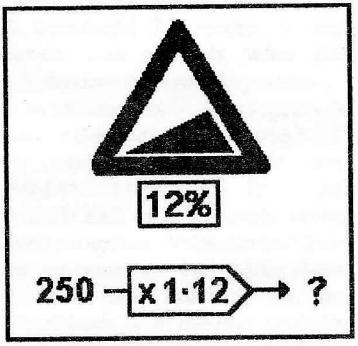
numbers

Explore the multiplication table, number spirals, even, prime and triangle numbers, and the links between them.

Single user £19
School licence £40



NEW percent



With diagrams, simple explanations and real-life examples, Percent teaches all about percentages. For beginners, it explains what percentages are, how to estimate them, and the connection with fractions and decimals. More advanced learners can find out about percentage increases, decreases, taxes, and more.

Single user £19
School licence £40

Numbers and Percent are easily-installed Windows applications supplied with on-screen help. They are the text-books of the future ...

Programs require an IBM-compatible computer (eg. Nimbus 286/386) with colour monitor, running Microsoft Windows in standard or enhanced mode.

Orders or further information:

Lizard Software,
23 Tregellas road,
Mullion,
Helston,
Cornwall,
TR12 7DX.

Other Horizons

David Palmer

As if managing a network weren't enough, there are some interesting new areas to explore like CD ROMs and outside networks. I bought an Apple Mac in order to show alternative operating systems and to run a CD ROM research station. I also fitted it with a modem (outrageous price of £50 which included a year's subscription to Compuserve). Compuserve is based in the USA but can be accessed by a local phone call from most areas of Britain. There was an excellent article by Simon Midgely in Educational Computing Magazine about Compuserve. I haven't managed anything as good as his project but I have used it to get up-to-date news from Reuters. The system keeps 48 hours of headlines and our staff enjoyed the international breadth of the topics. You can also ask it to "clip" stories on any keyword that you set. When you log on you will then get a folder with all the stories related to your keyword. Business studies departments (or budding entrepreneurs) might also use the financial services which have simular capabilities. You can alos download satellite images. It has a first class international e-mail system (which offers access not only to other Compuserve users but also many other major e-mail systems). You can even send faxes and since they are electronically generated, the copy at the other end is very clean. There are too many forums too list (703 at the end of August but growing all the time) and the speed with which posted bulletin messages are answered is amazing.

Equally boggling is the potential of CD's. A single disc can hold nearly 700Mb of data (or even more if it is compressed). I have one disc with a year's copies of the Times and it is indexed on every noun in 82,000 articles. That is impressive but what is even more impressive is that it will search for a keyword and come back with the headlines of the articles containing it in less than a minute. Clicking on a headline produces the text and can produce a picture too. I also have the Dictionary of the Living World, a biology dictionary which offers animations, sounds and video clips to go with some of the entries. These are not cheap. Nautilus is a monthly CD which contains at least 300Mb of resources, multi-media presentations, programs, demos, clip and digitised art, articles etc., etc. It costs $150 for a year which translates to about £9 per disc. I have a few Mac demo discs and if you send me a self addressed Jiffy bag or £2 to cover costs then I can send you one. Alternatively, for an IBM demo disc which runs under Windows, write directly to Nautilus, 7001 Discovery Blvd, Dublin, Ohio, USA, 43017-8066 Tel: 0101-614-766-3165. (There is a charge of about $5 for carriage etc; quote your Visa number and they will charge it to that.) Tell them I sent you!

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Micro Mart

For Sale

12 PC186 TN stations with mouse and network cable. £350 each or reasonable offer considered.

Contact: Angie Gaunt or John Kinsells at William Beaumont High School, Long Lane, Warrington WA2 8PX. Phone: 0925 35807 / 38682

For Sale

PC186 XN20 with 20Mb hard drive, floppy drive, 1.5Mb of memory, IBM utility board and 1.32F firmware, some business software. £450 or reasonable offer considered. A 24 pin wide carriage brother printer is also available.

Contact: Dave Richardson, Lion Stands, Kings Buildings, Station Road, Otley, West Yorkshire LS21 3HX

For Sale

Two 2Mb RAM boards for VX 386/25 or VX 486. Will sell or swap for 2Mb RAM boards for an AX.

Contact: Richard Naylor at Methodist College, 1 Malone Road, Belfast, BT9 6BY

For Sale

Nimbus PC186 Computers:

2x TN network stations	£100 each
1x PC2 - 576k RAM	£175
1 x PC2 - 704k RAM	£175
2 x PC2 - 1024k RAM	£175 each

Software:

Microsoft Word 3 (Nimbus)	£50
Windows 2.0 (Nimbus)	£50
Aldus PageMaker 1.0 (Any machine)	£75.00
NewSPAper (DTP, Nimbus)	£50.00

Other hardware available in the near future:

2 x PC1 computers
1 x Hard disc (XW40)
1 x Tape Backup unit (CW20)
1 x Network file server

All the equipment is approximately 6 years old and all prices are inclusive of VAT.

For further information contact Trevor Houiellebecq, Len Aves or David Bradley at the following address:

London Bible College, Green Lane, Northwood, Middlesex, HA6 2UW. Tel: 0923 826061

Wanted

Any manuals for the 480z or unwanted software; please contact Mr I McKenzie at Flat 53, 10 Kingsway Court, Scotstown, Glasgow, G14 9TD

Available FREE to school or similar

3 x 480z, 1 double disc drive, 2 colour and 1 mono monitor. Machines were used with disc sharing so they should be usable on a network.
Contact David Bagon
Health and Safety Executive
14 Cardiff Road Luton LU1 1PP
Tel: 0582 34121

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Ideas in PaintSPA

Steve Rochford

PaintSPA has been available since the very first Nimbus was shipped and was available for the 480z before that. Although it's been around a long time it has undergone a number of revisions to make it more powerful and to take advantage of the more powerful computers now used to run it. It supports most printers that you are likely to find either in the home or school (from 9pin dot matrix through 24 pin to ink jet (including colour) and PostScript laser!) It is a simple to use program that can be used to produce some very impressive results. *Ideas in PaintSPA* is a package aimed at letting users get to grips with more of its facilities and also finding out some of the less obvious things for which an art package on a computer can be used.

The package comprises a 16 page booklet and a disc. In common with all SPA products the installation instructions are clear and easy to follow and you quickly have a working system.

The book is filled with suggestions for working with PaintSPA. It starts with information on how to use the overlay facility. This lets you bring in one picture and add it to a second picture that you have also prepared. There is then some work on nets (including ideas for building castles, making packaging for various products and investigating mathematical solids).

There is then some work on using copying and grids - producing stamps and preparing work for embroidery samplers. I think this is one of the areas where PaintSPA is not as good as Draw Mouse that allows much more complex repeat patterns to be produced automatically but this is a small point.

Copy is used again to produce some excellent pictograms; you can produce pictograms in Excel but this is more fun and a lot easier for younger or less able children because they can grasp exactly what they are doing.

The next section involves work on maps; maps of Kent, the UK and the whole world are provided but advice on how to create your own is also given (get a map of about the right size, trace it onto transparent overhead projector film, tape this onto the screen and then copy round the outline). Once again, there are lots of small hints about how to get the best results from your starting map and ideas for what you can do with the map once you have it.

Finally, there is information on how you can integrate the use of PaintSPA with other programs, both those from SPA and from third parties (the fact that so much third party software works with PaintSPA is a tribute to the quality of the product). Addresses of some useful companies are also given.

In summary, if you have PaintSPA (and it has been included with the network for some time now) then this will probably give you some useful ideas. The language in the book is reasonably accessible and should be readable by quite young children. If you don't have PaintSPA but you do have a computer at home and want to "make pictures" with it, then this it's definitely worth looking at PaintSPA and this package.

SPA are at PO Box 59, Tewkesbury, GL20 6AB Tel: 0684 81700

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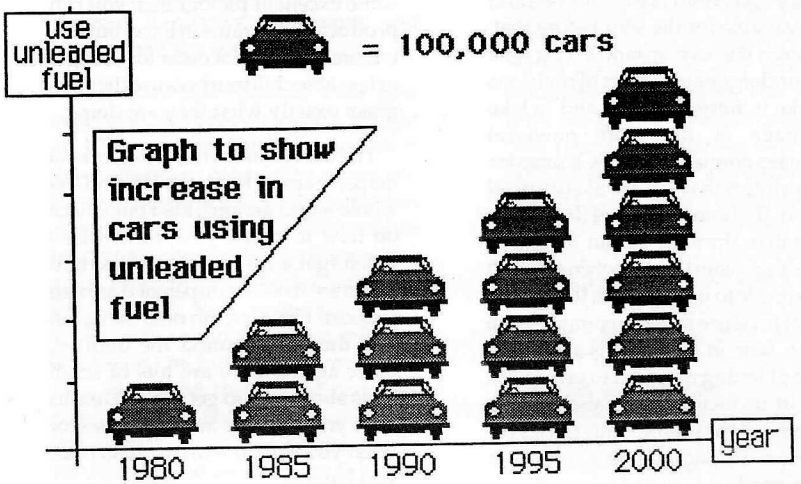

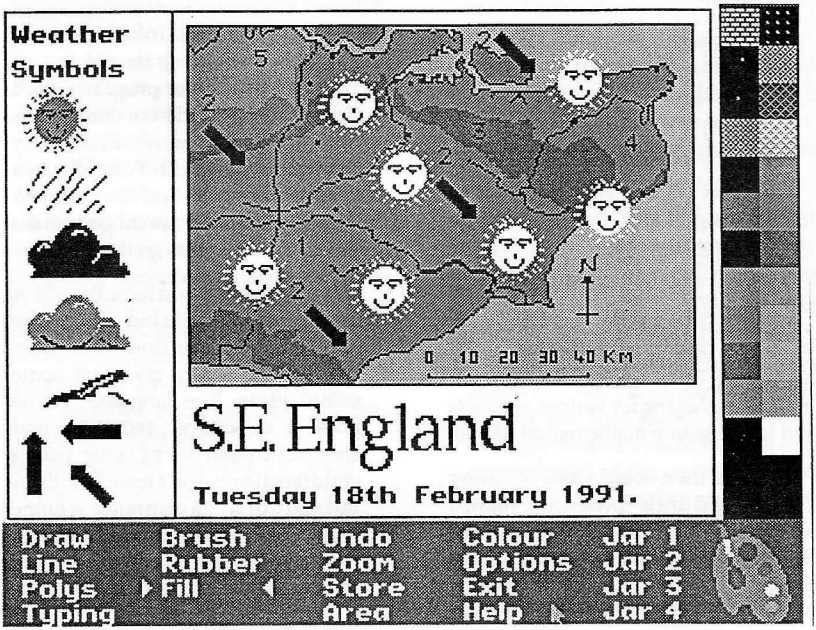

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Communications

I welcome submissions for the magazine from anyone. You don't have to be a great writer to send something in; send a letter or a short tip for the Hints and Tips pages, everything is welcome. If you want to phone and talk something over then please do; even if you aren't sure how to write something down then I can always include your ideas in Hints and Tips or as a plea for help.

I would be particularly pleased to hear from the people who are using RM computers at home; there are quite a lot of you out there. Some of you will be experienced at working with computers and I would be interested to know why you chose RM for home use. Others will have responded to RM's advertising, perhaps because your children use the same computers at school. How are you getting on with your new machine? Did you have any problems getting started? It doesn't matter if you still don't know the answer to the problem- this is how you'll find out - and it doesn't matter if you think that your problem was trivial; remember that there are many other people who are going to be in exactly the same position as you and will welcome the help that you can give.

If you are writing for me then the ideal is to send me a disc produced using Word or Word for Windows but I can cope with any word processor that runs on a Nimbus (I think). If what you are sending is short then a letter on good old fashioned paper is fine.

Finally, we pay for published articles at the rate of £5 per printed page (although all payments are at the Editor's discretion).

Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

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Membership Form

Please use capitals

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Job title (if appropriate) .....

Address .....

.....

.....

Postcode .....

I enclose a cheque payable to RMUG/order for £15 (£20 for overseas members). If you are not enclosing a cheque then please send an official order, indicating clearly to whom the invoice should be sent.

In order to serve our members better we like to know something about them and what they do with their computers. The information you give is confidential and we are registered as Data Users under the Data Protection Act.

Are your computers mainly: ☐ standalone ☐ networked

Please tick the areas in which you are interested.

☐ Word processing	☐ Spreadsheets	☐ Databases	☐ High Level Languages
☐ Education	☐ DTP	☐ Art/Graphics	☐ Low Level Languages
☐ Administration	☐ CAL	☐ CDT	☐ Communications
☐ Windows	☐ Other	☐	☐

Please tick the best description of yourself or your institution

☐ Sole Trader	☐ Limited Co.	☐ Primary School	☐ Charity
☐ Middle School	☐ Secondary Sch	☐ 6th Form College	☐ FE College
☐ HE College	☐ Polytechnic	☐ University	☐ R&D
☐ Personal User	☐ Computer Centre	☐ Independent School	☐ Other

Please send your form to:

Steve Rochford, RMUG, FREEPOST, London W12 0BR

You may photocopy this form if you do not wish to cut your magazine.

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MSM Micro Systems Maintenance Limited
Telephone: (0793) 616888

Nationwide Maintenance of Micro Computers and their Associated Peripherals

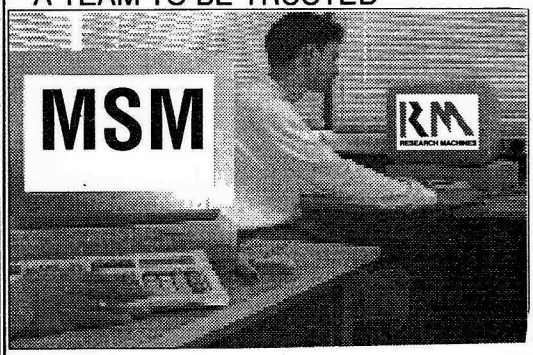
MSM are RM plc's authorised national service agents

If your Nimbus, VX system, 380Z or 480Z needs attention, we'll fix it for you, and won't charge you the earth. If you are responsible for keeping networks up and running, talk to us about a maintenance contract - our quotation will be a pleasant surprise.

We are the only company authorised to do RM warranty work, and we also carry out upgrades and modifications, either on-site or at one of our eight regional service centres.

We'll send you an information pack and/or quotation.

A TEAM TO BE TRUSTED



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